TABLE 4.—*Number and Per Cent of Orthopedic Recommendations Which Orthopedic Surgeons Made for 397 Patients*

Recommendations for Orthopedic Care	Number of Recommendations	Per Cent Distribution
Supervision	42	10.6
Surgery (orthopedic and plastic)	118	29.7
X-ray	29	7.3
Plaster cast	13	3.3
Appliance	74	18.6
Exercise	69	17.4
Referral to Clinic	20	5.1
Referral to Private Physician	26	6.5
Referral to Hospital	6	1.5
Total	397	100.0

recommendations or 12.6 per cent were for the services of an ophthalmologist. Almost as many received recommendations of an orthodontic nature as required the services of other specialists.

Table 4 shows the type of orthopedic recommendations which examining surgeons made for 397 children.

As shown in Table 4, almost one-third of the total orthopedic recommendations or 29.7 per cent was made for surgery which represents both orthopedic and plastic surgery. Ten per cent of the total recommendations was for continued orthopedic supervision. Almost as many recommendations were made for corrective exercises as for appliances. In the group for appliances are included corrective shoes.

Only 13.1 per cent of the total children for whom orthopedic recommendations were made was referred back to the clinic, private physician, or hospital previously attended. Almost as many had been under the care of a private physician as of a clinic. These figures might indicate either that the majority of the children examined were not under medical supervision or that the service required was that in a specialized field.

Although the services of the orthopedic surgeons are made available through the Crippled Children's Program, its method of reaching those requiring these services is in a large measure dependent upon the coöperation extended by local health, educational and social agencies, the schools, service clubs, private philanthropic societies, and other community and State organizations who assist in case finding service during the time the clinic is in progress, transportation of patients, lunches for patients, follow-up, and many other services which interested organizations are able to provide to the crippled patient in the local community.

The fact that recommendations were made for 90 per cent of the patients examined signifies not only the important contribution of the diagnostic clinic in meeting the needs of these patients in various California counties, but the necessity of following through the recommendations of the physician so that, in the end, medical care is not only conserved but made more truly effective.

In the final analysis, the end-results of provisions made available through the Crippled Children's Program will be directly related to the whole-hearted and enthusiastic coöperation of related agencies, organizations, and individuals. Their interest and service may assist the crippled patient to achieve the best possible physical, mental, and vocational adjustment.

CORONER SYSTEM: A PROPOSED MEDICAL EXAMINER SYSTEM FOR MICHIGAN

In 1877 Massachusetts abolished the office of coroner and replaced it with the office of medical examiner. The law authorized two full-time, salaried medical examiners for Suffolk County, in which Boston is situated, and in each of the other counties as many part-time examiners on a fee basis as the county commissioners might deem necessary. In such counties the number varies from one to eleven. The office is appointive, the term of service being seven years. Repeated reappointment of the medical examiners of Boston has resulted in a high type of medico-legal investigation not approached in any coroner jurisdiction. The success of the new system in Boston led to its adoption in New York City in 1918 and in Essex County (Newark), New Jersey, in 1927. In each of these urban centers the superiority of the medical examiner system has been amply demonstrated.

In sparsely settled rural counties the problem of the antiquated coroner's office is more difficult to solve because of the relatively small amount of work to be done. In Massachusetts, outside of Suffolk County, the medical examiner system is an improvement over the coroner system, but still leaves much to be desired. With modern transportation facilities there is no necessity for from one to eleven medical examiners per county. In rural regions the consolidation of two or more adjoining counties into a medical examiner district under a single examiner might induce competent young physicians to enter the field of medico-legal pathology.

On March 29 a bill abolishing the coroner's office and setting up an examiner system was introduced into the legislature of Michigan. The essential features of the title of this bill are:

A bill relative to investigations in certain instances of the causes of death within this state due to violence, negligence or other act or omission of a criminal nature; to provide for the taking of statements from injured persons under certain circumstances; to abolish the office of coroner, and to transfer the powers and duties to a state medical examiner and to county medical examiners; to create the office of state medical examiner, and provide for county medical examiners and assistants, and to prescribe their powers and duties. . . .

The state medical examiner, who has no counterpart in the coroner system of any state, in addition to qualifications as to residence, profession and licensure, shall "possess special training in pathology and the investigation of violent deaths." He "is authorized to incur such . . . expenses and employ such assistants as shall be necessary in carrying out the provisions of this act." A reasonable appropriation for this provision would assure the organization and maintenance of a central medico-legal laboratory or institute, which would serve the entire state through the county medical examiners. This would be the most enlightened step in this field thus far taken in this country and would go far in the development of a system of scientific medico-legal investigation. It is further provided that the state medical examiner shall supervise the county examiners, shall consult and advise with them, and may perform the duties of any county examiner who may be negligent in the performance of his work.

For each county there is to be a county medical examiner appointed for a term of three years by the board of supervisors with the approval of the state medical examiner. The county examiner must be a resident of the county for which he is appointed, or of an adjoining county. The latter provision makes it possible for a single examiner to serve two adjoining counties. This is a step toward desirable functional consolidation. The board of supervisors may also appoint, with the approval of the state medical examiner, such deputy county medical examiners as may be necessary. This would insure the proper performance of the work of populous counties. The state medical examiner may recommend to the county board of supervisors the removal of any county examiner or deputy who may fail to perform his duties properly.

County medical examiners are authorized to make the necessary examinations of the bodies of such persons "as are supposed to have come to their death by violence; without medical attendance up to a time thirty-six hours prior to the hour of death; abortion, whether self-induced or otherwise; or in case any prisoner in any county or city jail shall die while so imprisoned." The county examiner is the sole judge of the necessity for postmortem examination in such cases. He may retain, for so long as may be necessary, such parts of the body as may be necessary for the detection of crime. On written order of the prosecuting attorney or attorney-general or on petition of six electors of the county, the county medical examiner may investigate the death of any person whose death is believed to have occurred in the county. No dead body may be cremated without the consent of the county medical examiner. The latter official is authorized to take the statement of "any person who has been injured by the criminal act, omission or negligence of another, and there is reason to believe that death is impending."

One of the worst features of the coroner system is the coroner's jury, as such juries are usually constituted. The Michigan act does not require a jury, but makes the calling of a jury optional with the county medical examiner. The latter may issue summons; failure of attendance is subject to penalty. If it appears that death was due to the unlawful act of another, the county medical examiner shall submit his conclusions and those of the jury, if one was called, to the prosecuting attorney. Any and all medical examiners may be required to testify in behalf of the state.

In a measure so enlightened as this, it is a matter of regret to note one seriously undesirable feature. The bill provides that the state medical examiner is to be appointed by the governor for a term of four years. This carries with it the potentiality of making the medical examiner system a part of a state political machine. The terms of governor and state medical examiner should not coincide. If appointment is made by the governor, the term of the state medical examiner should be seven years, as in Massachusetts. It is to be hoped that this feature will be amended and that the measure will become a law. To Michigan would then belong the credit of being the first state to devise a state-wide agency for the scientific investigation of deaths of which government must take official cognizance.—*Journal of the American Medical Association.*

RABIES: AN ALL-YEAR HAZARD*

"Dog days," according to a dictionary definition, is a term used to describe "the sultry, close part of summer when dogs are supposed to be specially liable to go mad." It will be news, therefore, to the average person that actually fewer animals go mad in summer than during any other season of the year. This conclusion is indisputable. It is based on reports of the prevalence of rabies in animals for six years, as supplied to the United States Public Health Service by approximately one-half of the states.

Spring, for which period the six-year daily average of cases of rabid animals was 12.2, is the season when the disease is most prevalent. There is very little difference, however, between the incidence of rabies in the spring and during the cold months of winter, when the daily average is 11.7. During the summer, which includes the "dog days," the average falls to 8.2. In other words, only two animals become rabid in summer to every three in the spring, and only seven during the hot summer months to every ten during the winter.

The chief lesson to be learned from these figures, however, is the necessity for systematic, 100 per cent muzzling of dogs at all seasons of the year. Many instances are on record of more or less determined opposition to the enforcement of dog-muzzling laws and ordinances during the cold months. Such resistance doubtless has its foundation in the impression that rabies is a warm-weather disease in both animals and human beings. The facts, as just stated, show beyond contradiction that this impression is a mistaken one, so far as the seasonal incidence of this dread disease in animals is concerned.

With respect to human rabies, the situation differs only slightly from that described for animals. While it is true that a few more human cases are reported for July and August than at other seasons, the margin of difference is slight. In fact, the Public Health Service records show that for every five cases of human rabies in both July and August there are four cases in January, May, and October. The slightly larger number of these "dog days" cases in human beings is probably due, in part, to the fact that the length of the incubation period in man, while variable, averages from six weeks to two months. It is thus to be expected that the heaviest incidence of animal rabies, which occurs in the spring, will be followed by the maximum prevalence of human rabies in the summer months. Another point to be reckoned with is that the late spring and summer are the periods of greatest out-of-doors exposure to dog bites. This applies especially to children, with whom incubation is usually of shorter duration than in adults, and who, accordingly, are more apt to develop rabies soon after being bitten.

Since rabies is an all-year-round disease, both as to source of infection from animals and occurrence in man, the importance of rigid enforcement of dog-muzzling laws and of gathering in stray dogs at all seasons is apparent. When the disease is once established in a human being it is hopelessly incurable. No method of treatment has yet been discovered which, at that stage, is of the slightest avail. The only protection against rabies lies in its prevention by means of the Pasteur prophylactic treatment. This should be administered as soon as possible after a dog bite, whether the animal be merely suspected of being mad or is known to be so. Fortunately, the treatment gives a practically 100 per cent protection. Conclusive evidence of its efficacy is afforded by the fact that in 6,156 cases treated at the Pasteur Institute in Paris in the ten-year period 1924 to 1933 only a single death occurred.—*Statistical Bulletin, Metropolitan Life Insurance Company,* May, 1937.

* A rabies quarantine is now being enforced in the city of Los Angeles.

THE PLAGUE SITUATION*

It is now just forty years since the present pandemic of plague began with the appearance of an epidemic in Hong Kong, and it is just thirty-four years since it reached California. Arriving in India from Hong Kong, it found favorable conditions and soon after 1900 the deaths reached a million per year. Even now, after nearly forty years of continuous activity, the deaths from plague in India are occurring at the rate of three to four thousand per week. Considered in the light of the known history of plague, there is nothing unusual in these facts, nor is there in the length of time it has been continuously present in California any ground for believing that it is dying out and will shortly disappear. It is characteristic of plague that its period is very slow, and the rise and fall of epidemics is measured in decades and centuries. Upon its appearance in a country it is sometimes years before its presence is manifested by any great mortality, and in the subsidence of a pandemic its final disappearance is interrupted by sporadic localized outbreaks. The long range periodicity of plague, as well as its persistence, is well shown in the history of plague in England, where it finally disappeared in 1680 after its almost continuous presence for 136 years. The Great Plague of London occurred in 1665 with about 70,000 deaths, but there had been, previous to that time and within the 136-year period, five epidemics of from 10,000 to 35,000 deaths at intervals of thirty, ten, twenty-two, eleven, and thirty years.

The following, quoted from Procopius of Caesarea in his History of the Persian Wars, describing the pandemic of the sixth century, which is the first authentic historical pandemic, is interesting in its parallelism with more modern appearances. "It arose in Egypt with the inhabitants of Pelusium, then dividing spread one way through Alexandria and the rest of Egypt, the other into Palestine which borders on Egypt, and then traveled over the world, always advancing with a progress marked by certain definite spaces of time. For it seemed to advance by a certain law and to demand a certain space of time in every country, discharging its venom against no one on the way casually, but spreading on this side and on that to the uttermost ends of the world as if it feared lest incautiously it should pass by any corner or recess upon earth. It spared neither island nor cave nor mountain top where man dwelt. If it passed over any place only slightly or mildly touching the inhabitants, it returned there afterward, leaving untouched the neighbors against whom it had spent its rage before, and it did not depart from there before it made up the full measure of the dead in proportion to the amount of destruction which it had brought on its neighbors. Always beginning at the sea coast, it spread into the interior. In the second year it reached Byzantium about the middle of the spring where, as it happened, I was staying."

The great epidemics of ancient times seem to have been of the bubonic form, although it must be remembered that historical accounts of plagues include all epidemic disease, typhus, smallpox, etc., as well as plague, and it is only the description of buboes by some of the writers that identify bubonic plague. Pneumonic plague might have occurred, but for authentic accounts of pneumonic plague epidemics we have only comparatively small outbreaks in recent years in Manchuria, in limited districts of India, and on a still smaller scale in California. There are, however, references seeming to indicate that pneumonic plague accompanied

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